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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/421,605	10/20/1999	AMY LOU GLAWE	2393/504	4384

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EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 02/07/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/421,605

Applicant(s)

GLAWE ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 17. 6) ☐ Other: _____

DETAILED ACTION

1. The request filed on 1/23/03 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/421605 is acceptable and a CPA has been established. An action on the CPA follows. Claims 1-3 and 5-38 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons recited in paragraph 3 of the prior office action and restated below.

Claim 38 recites the limitation “an outer layer comprising a blend of a very low density polyolefin, ethylene vinyl acetate and a compatibilizer”. The original disclosure recites that the “compatibilizer” is preferably ethylene α -olefin having a density less than 0.900 which reads upon a very low density polyolefin and hence the compatibilizer and the very low density polyolefin are defined so broadly that they read upon one another, therefore causing confusion as to exactly what materials are required by the claims. A claim in which one ingredient is defined so broadly that it reads upon a second does not meet the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Ferm and Boynton*, 162 USPQ (BdPatApp & Int 1969.)

4. Claims 6, 19, 24, 26, 28 and 32 are rejection under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons as recited in paragraph 4 of the prior office action and restated below.

The recited claims rely on trademarks as the only limitations narrowing a preceding claim wherein the use of trademarks in a claim is inherently indefinite given that the trademark can change over time and hence does not provide a sufficient description of the limitations intended to be encompassed by the claims. Further, it is noted that the use of trademarks in a claim adversely affects their validity as trademarks.

5. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons recited in paragraph 5 of the prior office action and restated below.

Claim 29 recites the limitation “greater than about” in line 2 which renders the claim indefinite for the term “greater than” indicates that the value is larger than a particular end-point, however about the end-point is variable. Hence, “greater than about 37 μ m” could actually correspond to a value less than 37 μ m, ie. 36 μ m is **about** 37 μ m, and 36.5 μ m is **greater than** 36 μ m, therefore, based on the limitation as cited, 36.5 μ m is **greater than about** 37 μ m. Therefore the term “greater than about” is unclear particularly given that the specification provides no guidance with regards to the term or degree.

Claim Rejections - 35 USC § 103

6. Claims 1-3, 5, 7-9, 20-22, 27, 29-31 and 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al (USPN 6,068,933) in view of Wilhoit et al (USPN 5,928,740) and in further view of Wilhoit (USPN 5,403,668) for the reasons recited in paragraph 6 of the prior office action and restated below.

Shepard et al teach a multilayer polymeric film that is desirable for thermoforming applications wherein the film has improved clarity, gloss, and low haze (Abstract.) The

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multilayer films are useful for packaging of products such as food, have a thickness of 2-10 mils ($50.8\mu\text{m}$ - $254\mu\text{m}$), and comprise inner layer(s) of nylon, preferably 5-35wt% of an amorphous nylon which is characterized by the lack of an endotherm crystalline melting point in a Differential Scanning Calorimeter test, blended with one or more various other nylons commonly used in the art of making polymer films such as nylon 6, nylon 6,6, or nylon 12, with each nylon layer having a thickness of from 5 to 20% of the thickness of the film (*hence ranging from $0.1\mu\text{m}$ - $50.8\mu\text{m}$* ; Col. 6, lines 60-61; Col. 9, lines 60-62; Col. 10, lines 36-38; Col. 11, lines 20-21 and lines 55-57; Col. 4, lines 29-32; Col. 7, lines 23-Col. 14; Col. 9, line 10.) Shepard et al teach that the multilayer films also comprise a sealant layer capable of forming a heat seal and comprising any of various polymers including LLDPE which includes all linear polyethylenes with a density up to about 0.95g/cc, LDPE, EVA, MDPE, EMA, olefins catalyzed by single site catalysts (metallocene catalyzed olefins), EMA, EMAA, an ionomer, or **a blend of any of these polymers**, with example heat seal polymers including a very low density polyethylene formed from ethylene and octene, and has a thickness of between 15-40% of the film thickness (*hence ranging from $7.62\mu\text{m}$ - $101.6\mu\text{m}$* ; Col. 5, line 44- Col. 6, line 4.) The multilayer films may further comprise adhesive layers such as anhydride-modified polyolefins and have a thickness of 5-40% of the film thickness (*hence ranging from $0.1\mu\text{m}$ - $50.8\mu\text{m}$* ; Col. 8, lines 23-35.) The multilayer film may further include antiblocking agents (processing aids) (Col. 8, lines 52-60.) Shepard et al specifically teach an embodiment comprising a sealant outer layer, nylon intermediate layers, two adhesive layers, and a second non-moisture barrier outer layer on the other side of the nylon core layers wherein the non-moisture barrier outer layer may comprise any of the following polymers: medium density polyethylene, LLDPE, LDPE, EVA, styrene, EMA, EAA, EMAA, an

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ionomer, or blends of any of these polymers (Col. 11, lines 43-49.) Though Shepard et al teach that the sealant layer may comprise the same polymers as disclosed in the instant invention, Shepard et al do not specifically teach the blend composition as instantly claimed. However, Wilhoit et al '740 teach thermoplastic ethylene- α -olefin copolymer blends and mono- and multilayer films therefrom having improved heat sealing properties and improved puncture resistance in food packaging applications wherein the blend has a first polymer of ethylene and at least one α -olefin having a polymer melting point between 55 to 75C, a density of 0.900 g/cc or less, and present in an amount of at least 10wt% of the total blend layer, preferably 20-35wt% (*compatibilizer of instant invention*); a second polymer of ethylene and at least one α -olefin having a polymer melting point between 85 to 110C, a density of 0.900 to 0.915 (*VLDPE*), and present in an amount of at least 10wt% and preferably 25-60wt% of the blend; a third thermoplastic polymer having a melting point between 115 to 130C and present in an amount of at least 10wt%, preferably 10-30wt%; and preferably a fourth polymer which is EVA, having a melting point between 90 to 100C, preferably in an amount of 10-30wt%; wherein the blend layer may have less than 15% EVA, greater than 25% EVA, or 15-25% EVA (Abstract; Col. 7, lines 24-51; Col. 7, lines 59-66; Col. 8, lines 14-30; Col. 8, line 49-Col. 9, line 26; Col. 10, lines 49-59.) Wilhoit et al '740 teach that blends of the invention may be manufactured into various useful articles for packaging foods, etc., such as die melt, molded, thermoformed and rigid solid bodies in the form of mono or multilayer films (Col. 11, lines 37-59.) Wilhoit et al '740 also teach that food packaging films, in general, one or more barrier layers such as nylon or EVOH used with a heat sealing layer such as of EVA, to producing packaging for oxygen and/or moisture sensitive foods (Col. 1, lines 12-36) and further teach that the blend composition

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provides improved heat sealing properties over other heat sealing materials (Col. 1, lines 12-36; Col. 5, line 64-Col. 6, line 32.) Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize the blend sealant layer taught by Wilhoit et al '740 as the sealant layer in the invention taught by Shepard et al to provide improved heat sealing properties and improved puncture resistance. Further, though Wilhoit et al '740 teach weight percentage ranges of the blend composition that fall within the instantly claimed ranges, Wilhoit et al '740 does not specifically limit the invention to the ranges as instantly claimed. However, the amounts of the blend components present in the blend are result-effective variables as taught by Wilhoit et al '740 and as further evidenced by Wilhoit '668, and hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize routine experimentation to determine the optimum amount of the blend components to provide in the sealant layer taught by Wilhoit et al '740 based on the desired sealant layer properties for a particular end use.

7. Claims 7-9, 20-22, 29-30, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 for the reasons recited in paragraph 7 of the prior office action and restated below.

The teachings of Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 are discussed above. Though Shepard et al teach that the multilayer film has a typical thickness of 2-10 mils (50.8 μ m-254 μ m), with each layer comprising a particular percentage of the total film thickness wherein the layer ranges fall within the instantly claimed ranges, Shepard et al do not specifically teach that the layers have a corresponding thickness as instantly claimed. However, as previously stated in the prior office action, given that it is well

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known in the art that the thickness of the layers is a result-effective variable wherein the thickness affects the properties of the film including mechanical properties as well as barrier properties, it would have been obvious to one skilled in the art to utilize routine experimentation to determine the optimum layer thickness for each layer of the multilayer film taught by Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668.

8. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 for the reasons recited in paragraph 8 of the prior office action and restated below.

The teachings of Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 are discussed above. Though Shepard et al teach that the multilayer film may further comprise an antiblocking agent which is a processing aid, Shepard et al do not specifically teach that the outer layer of the multilayer film comprises a fluoroelastomer processing aid in the amount instantly recited. However, as previously stated in the prior office action, processing aids including fluoroelastomer processing aids are conventional and well known additives in the art to incorporate into the outer layer of a film to improve the machinability and handling of the multilayer films, and hence, it would have been obvious to one skilled in the art at the time of the invention to incorporate conventional additives such as processing aids like fluoroelastomers into the outer layer of the film taught by Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668. Further, it would have been obvious to one skilled in the art at the time of the invention to determine the optimum amount of processing aid to provide the desired processability given that it is well known in the art that the

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amount is a result-effective variable affecting the machinability and handling of the resulting film.

9. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 for the reasons recited in paragraph 9 of the prior office action and restated below.

The teachings of Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 are discussed above. Shepard et al teach that the nylon intermediate layers preferably comprise 5-35wt% of an amorphous nylon blended with one or more various other nylons commonly used in the art of making polymeric films such as nylon 6, nylon 6,6, nylon 6, 12, or nylon 12. Though Shepard et al do not specifically teach the use of nylon 6,66 as the other nylon in the nylon blend layer, as previously stated in the prior office action, nylon 6,66 is an obvious and functionally equivalent species of nylon utilized in making polymer films and would have been obvious to one skilled in the art at the time of the invention. Further, it would have been obvious to one skilled in the art at the time of the invention to utilize any other conventional or functionally equivalent nylon copolymers such as nylon 6,66 in any comonomer ratio.

10. Claims 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 for the reasons recited in paragraph 10 of the prior office action and restated below.

The teachings of Shepard et al in view of Wilhoit et al '740 and in further view of Wilhoit '668 are discussed above. Shepard et al teach that the non-moisture barrier outer layer may include an ionomer but do not specifically teach that the ionomer is a sodium or zinc ionomer. However, as previously stated in the prior office action, sodium and/or zinc ionomers

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are obvious species of ionomeric material utilized in the art and would have been obvious to one skilled in the art at the time of the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Monique R. Jackson
Patent Examiner
Technology Center 1700
February 6, 2003